Technischer Kundendienst
UTS-Universal
Technik-Service GmbH

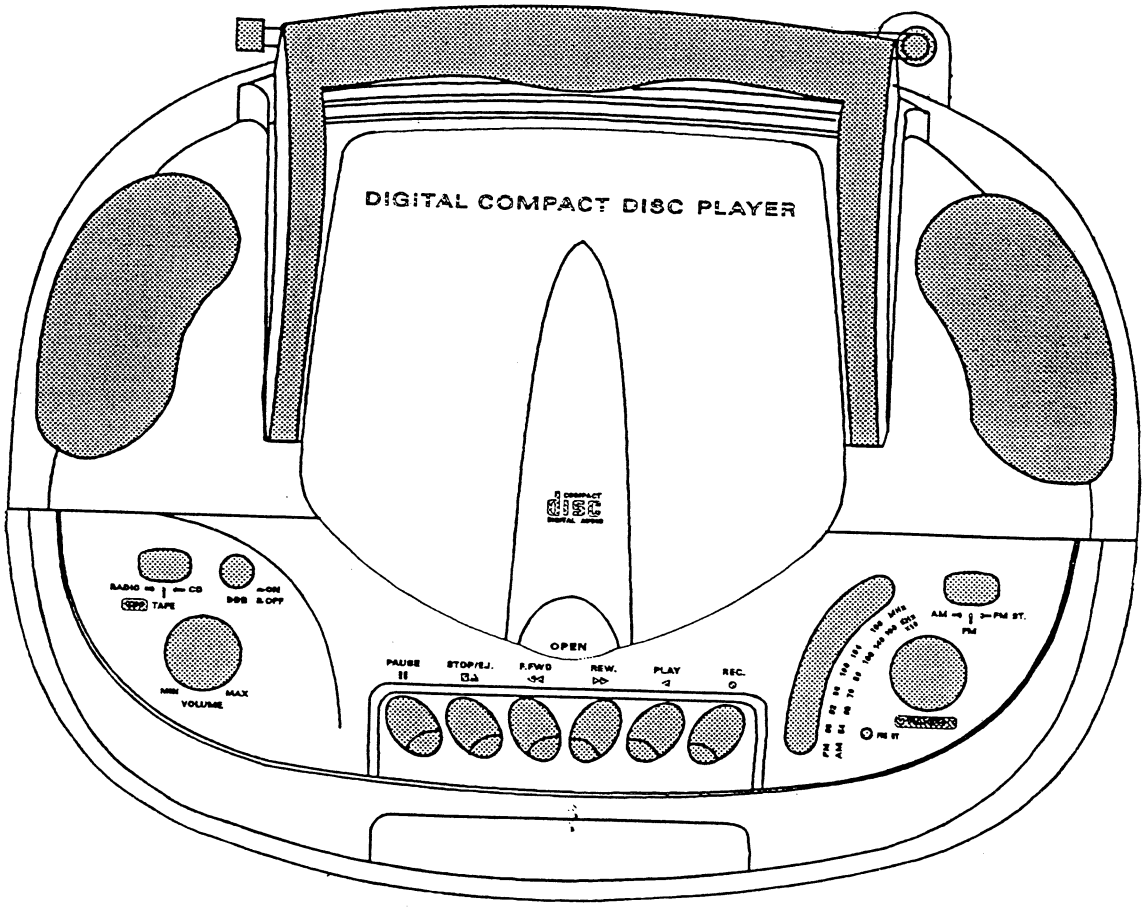
Artikel -Nr.:

Technische Unterlage

100.330-0

ETNr. 221.388.2

Radio-Recorder



UTS-Nr.: 999 QUELLE
Best.Nr.: 1003300/01
Ger.Bez.: UNIVERSUM-RADIORECORDER

GKz: G GERAET
WGT: 670 RADIO-RECORDER
KD-Sektor: R RUNDFUNK
BaumNr.: 00 KEIN DIAGNOSEBAUM VORHANDEN
Klassierung: RCD RADIO MIT CD-PLAYER
IFW-FehlerGru.: 205 RDF.,VERST.,TB.,PHONO,CD,CB
Type/Privileg/Universum.Nr CTR-CD1094
Beschreibung
VK-Preis: 139.00

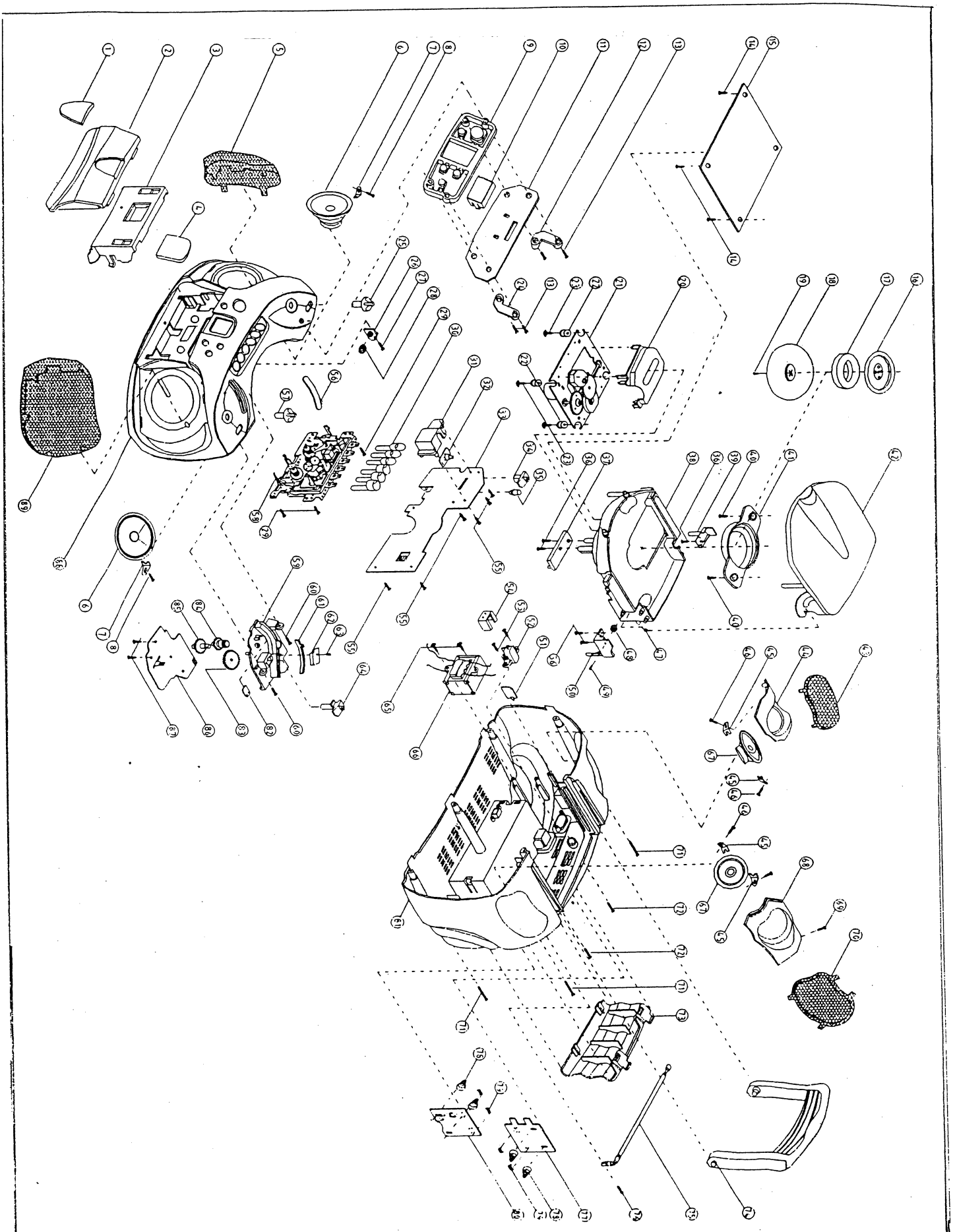
Serviceart: 01 UTS
Garantie fuer Kunden 12 Monate
Sondervereinbarungen: 0 SIEHE SERVICEART

Garantiereparatur 0004063 UTS UNIVERSAL-TECHNIK-SERVICE
Sondervereinbarungen: 0 SIEHE SERVICEART

KATALOG 995 **DATUM 01.12.1999** **SEITEN 10**

Nachdruck nicht gestattet
Änderungen vorbehalten

XPLODED VIEW(W/PARTS LIST)



TUNER ADJUSTMENTS

- FOR ADJUSTMENTS USE A PLASTIC SCREWDIVER.
- ADJUST THE INTERMEDIATE FREQUENCY TO THE FREQUENCY OF CERAMIC FILTER

AM IF (IFT LESS,ADJUSTMENT FREE)

IN PUT CONNECTIONS	OUT PUT CONNECTIONS	FREQUENCY	TUNING	ADJUSTMENT	INDICATION
SWEEP GENERATOR TERMINAL CLOSELY TO. L104	OSCILLOSCOPE TO.TP3	465 KHz	HIGH END	T3	BALANCE &MAX

FM IF

IN PUT CONNECTIONS	OUT PUT CONNECTIONS	FREQUENCY	TUNING	ADJUSTMENT	INDICATION
SWEEP SG 330 Ohm 0.01uF TP2 GND	OSCILLOSCOPE TO. TP3	10.7 MHz	LOW END	T4. T2	BALANCE &MAX

AM BAND

STEP	ADJUSTING CIRCUIT	CONNECTIONS IN PUT	CONNECTIONS OUT PUT	FREQUENCY	TUNING	SDJUSTMENT	INDICATION
1	TUNING	SWEEP		525KHz	LOW END	T1	
2	COVERAGE	GENERATOR	OSCILLOSCOPE	1650KHz	HIGH END	T	
3	TRACKING	TO TEST	TO. TP2	600KHz	600 KHz	L2	
4		LOOP		1400KHz	1400 KHz	TC2	MAX
5	REPEAT ADJUSTMENTS (FROM STEP 1 TO STEP 4)						

FM BAND

STEP	ADJUSTING CIRCUIT	CONNECTIONS IN PUT	CONNECTIONS OUT PUT	FREQUENCY	TUNING	SDJUSTMENT	INDICATION
1	TUNING	SWEEP		87 MHz	LOW END	L4	
2	COVERAGE	GENERATOR	OSCILLOSCOPE	108.5 MHz	HIGH END	TC1	
3	TRACKING	TO. TP1	TO. TP2	90 MHz	90 MHz	L3	
4				106 MHz	106 MHz	TC2	MAX
5	REPEAT ADJUSTMENTS (FROM STEP 1 TO STEP 4)						

FM MPX

CONDITION	FREQUENCY COUNTER CONNECTION	ADJUSTMENT	INDICATION
0.04 uF L4 FM OSC COIL	FREQUENCY COUNTER 76 330k TP3 GND	VR1 (B10K)	76KHz±100 Hz

PERFORMANCE SPECIFICATION

GENERAL TEST CONDITION

1. Power Supply	:	AC 230V/50Hz DC12V
2. Output Load	:	8 ohm/ch
3. Reference Output	:	50 mW/ch
4. Tuner Input Signal Source	:	50 ohm Test Loop For AM
	:	75 ohm Dummy For FM
5. Standard Modulation	:	30% 1KHz For AM 22.5KHz/DEV. 1KHz For FM 75KHz/DEV. 1KHz For FM-MPX.(PILOT:10%)

Note : Specification Subject To Change Without Notice.

AM SECTION

TEST ITEM		UNIT	NORMAL	LIMIT	TEST CONDITION
01. Tuning Rang		Hz	525-1650	525±10 1650±30	
02. I.F.		Hz	465	±5	
03. Max. Sens.	600 Hz	dB/M	52	60	
	1000 Hz	dB/M	52	60	
	1400 Hz	dB/M	52	60	
04. Useable Sens.	600 Hz	dB/M	60	66	
	1000 Hz	dB/M	60	66	
	1400 Hz	dB/M	60	66	
05. I.F.Rejection	600 Hz	dB	28	24	
06. Image Rejection	1400 Hz	dB	34	28	
07.-6dB Bandwidth	1000 Hz	kHz	6	4-9	
08. ACA +/-10kHz	1000 Hz	dB	18	12	
09. AGC Figure Merit	1000 Hz	dB	35	30	
10. Distortion	A. 5mV,30% Mod	%	2	5	VOL. AT Ref.Output
	B. 100mV,30% Mod	%	3	7	VOL. AT Ref.Output
11. TWEET,2ND & 3RD	5mV/M Input	%	5	10	
12. Modulation Hum	100mV/M Input	dB	40	35	
13. Hum at Min.Vol.		mV	2	5	
14. Audio Fidelity -6dB		Hz	50-2200	80-2000	
15.Output Power	a. Max.	W	2	1.6	30%, 1KHz Mod.
	b. 10% THD	W	1.6	1.1	100mV.M. Input

PERFORMANCE SPECIFICATION

FM SECTION

TEST ITEM		UNIT	NORMAL	LIMIT	TEST CONDITION
01. Tuning Range		MHz	87-108.5	87±0.5, 108.5±0.5	
02. I.F.		MHz	10.7	±0.2	
03. Max Sens.	90 MHz	dB	20	24	
	98 MHz	dB	20	24	
	106 MHz	dB	20	24	
04. 30dB Quieting Sens.	90 MHz	dB	20	26	
	98 MHz	dB	20	26	
	106 MHz	dB	20	26	
05. I.F. Rejection	90 MHz	dB	70	50	
06.Image Rejection	106 MHz	dB	28	22	
07.3dB Limit Sens.		dB	24	30	
08.AM Suppression		dB	35	30	
09.AFC Hold Range(-36B)		kHz	600	350-700	
10.Distortion	a. 22.5KHz DEV.1KHz	%	1	3	Vol. At Ref.Output
	b. 75KHz DEV,1KHz	%	2	5	Vol. At Ref.Output
11.Modulation Hum		dB	50	40	
12.Hum at Min. Vol.		mV	2	5	
13.Audio Fidelity -6dB		Hz	50-5000	80-4500	w/e Pre-em.
14.Output Power	a. Max.	W	2	1.6	75kHz DEV,1kHz.
	b.10% THD	W	1.6	1.1	1mV,Input

FM-MPX SECTION

TEST ITEM	UNIT	NORMAL	LIMIT	TEST CONDITION
01. Stereo Indicator Sens.	dB	16	24	
02. Channel Separation (1kHz)	dB	30	24	

PERFORMANCE SPECIFICATION

CASSETTE SECTION

TEST ITEM	UNIT	NORMAL	LIMIT	TEST CONDITION
01. Tape Speed	cm/sec.	4.75	+3 -2%	MTT-111N
02. Wow & Flutter WTD.RMS JIS	MHz	0.25	0.35	MTT-111N
03. Auto Stop Time	sec	--	--	
04. Output Power a.Max	W	2	1.6	MTT-112BN
b.10% THD	W	1.6	1.1	MTT-112BN
05. Hum & Noise a.Max. Vol	mV	20	30	
b. Min. Vol.	mV	2	5	
06. Playback Dis.(-10dB Level)	%	1	3	MTT-111N
07. Rec./Play Dis.(-10dB Level)	%	6	9	MTT-5511
08. Playback S/N (0dB Level)	dB	45	40	MTT-112BN
09. Rec./Play S/N (0dB Level)	dB	30	25	MTT-5511
10. Freq.Response Playback 125Hz	dB	±3	±6	MTT-257C
8kHz	dB	±3	±6	MTT-257C
11. Freq.Response Rec./Play 125Hz	dB	±3	±6	MTT-5511
(-10db Level) 8kHz	dB	±3	±6	MTT-5511
12. Crosstalk	dB	40	35	MTT-121N,W/B.P.F.
13. Channel Crosstalk	dB	30	25	MTT-141N
14. Erase Ratio (1kHz,0dB Level)	dB	30	25	W/B.P.F.
15. Alc Recovery Time	ms	-	-	
16. Alc Effect	dB	-	-	
17. Alc Balance	dB	-	-	
18. Channel Balance L.ch/R.ch	dB	1	3	
19. F.F Rew Time	Sec	155	170	C-60 TYPE

CD SECTION

TEST ITEM	UNIT	NORMAL	LIMIT	TEST CONDITION
01.Output Power a.Max.	W	2	1.6	A-BEX. TCD-784,No.2
b.10% THD	W	1.6	1.3	A-BEX. TCD-784,No.2
02.Channel Balance 1KHz L & R	dB	1	3	A-BEX. TCD-784,No.2
03.Freq.Response 100Hz VS 1KHz	dB	±1	±3	A-BEX. TCD-784,No.2 vs4
10KHz VS 1KHz	dB	±1	±3	A-BEX. TCD-784,No.2 vs5
04.S/N Ratio	dB	55	50	A-BEX. TCD-784,No.2 vs7
05.Distortion 1KHz	%	0.5	1.5	A-BEX. TCD-784,No.2
06.Channel Seperation 1KHz	dB	45	38	A-BEX. TCD-784,No.8 &10
07.Interruption	um	800	600	PHILIPS,SBC444A
08.Black Dots	um	800	600	PHILIPS,SBC444A
09.Finger Print	No.	TRACK No.9		PHILIPS,SBC444A
10.Min. Vol. Noise	mV	2	5	

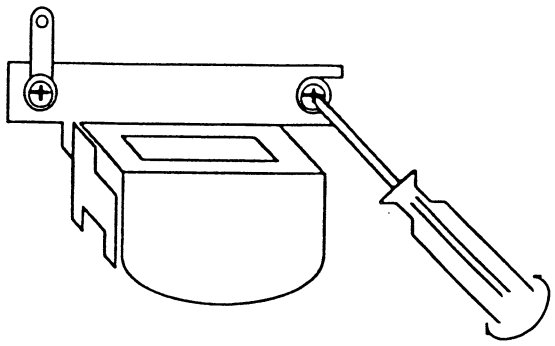
CASSETTE ADJUSTMENTS

HEAD AZIMUTH ADJUSTMENT

USING TAPE : TCC181A (6.3 KHz) PLAYBACK.

ADJUSTMENT : MAXIMUM AND RIGHT/LEFT BALANCED OUT PUT.

CONNECTION : VTVM & OSCILLOSCOPE TO SPEAKER.



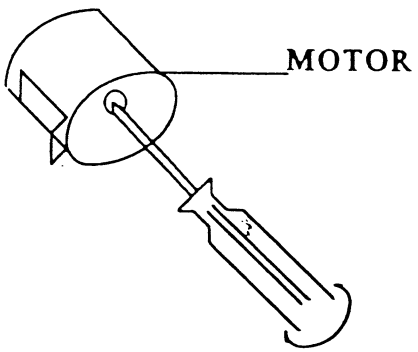
MOTOR SPEED ADJUSTMENT

USING TAPE : MTT-111N (3000Hz) PLAYBACK.

ADJUSTMENT : MOTOR.

CONNECTION : VTVM,OSCILLOSCOPE,FREQUENCY COUNTER TO SPEAKER.

STANDARD : 3000Hz(+20Hz,-10Hz)



AC BIAS OSC. ADJUSTMENT

CONDITION : PUSH REC.SWITSH TO REC.MODE,BEAT-CUT SWICH TO A.

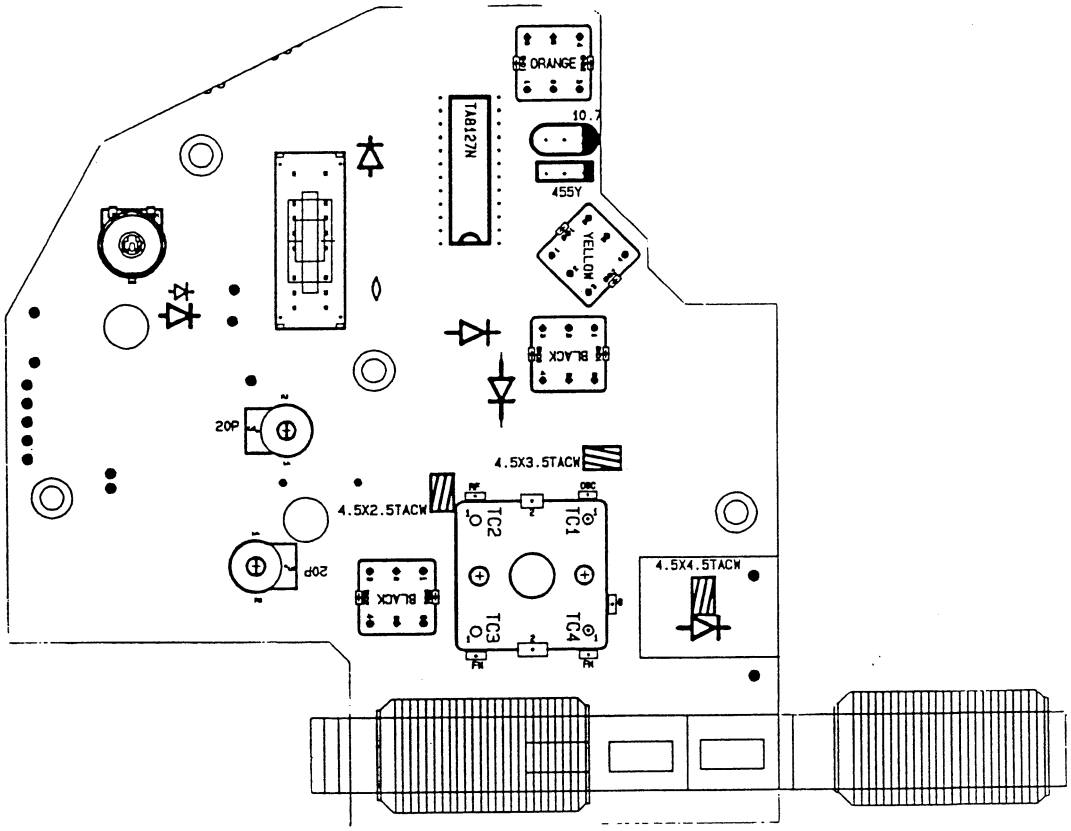
ADJUSTMENT : L100(AC BIAS OSC.COIL).

CONNECTION : VTVM,OSCILLOSCOPE&FREQUENCY COUNTER TO TP5.

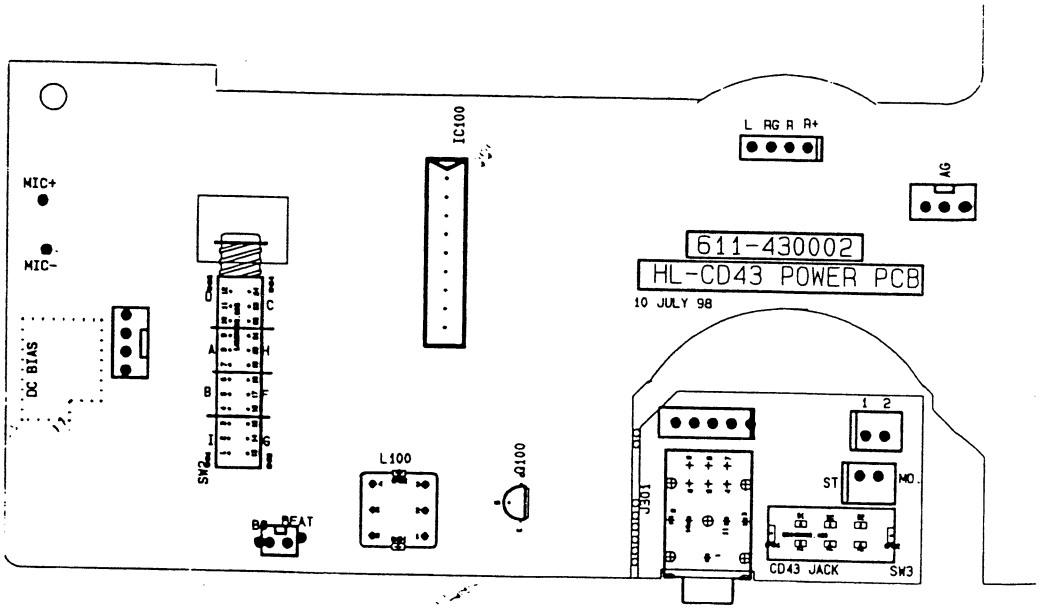
STANDARD : 64KHz(±2KHz)

ADJUSTMENT LOCATIONS

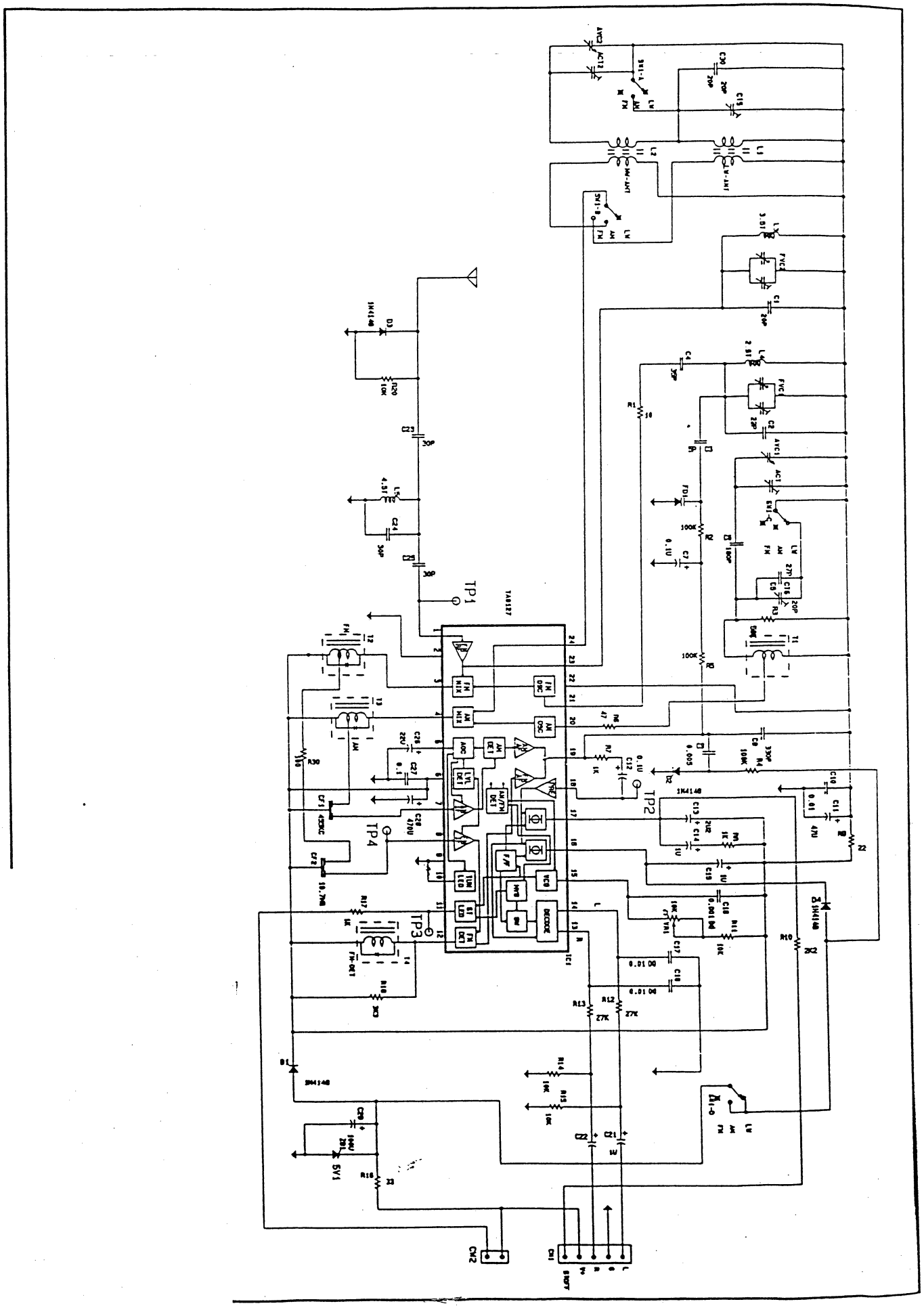
TUNER SECTION



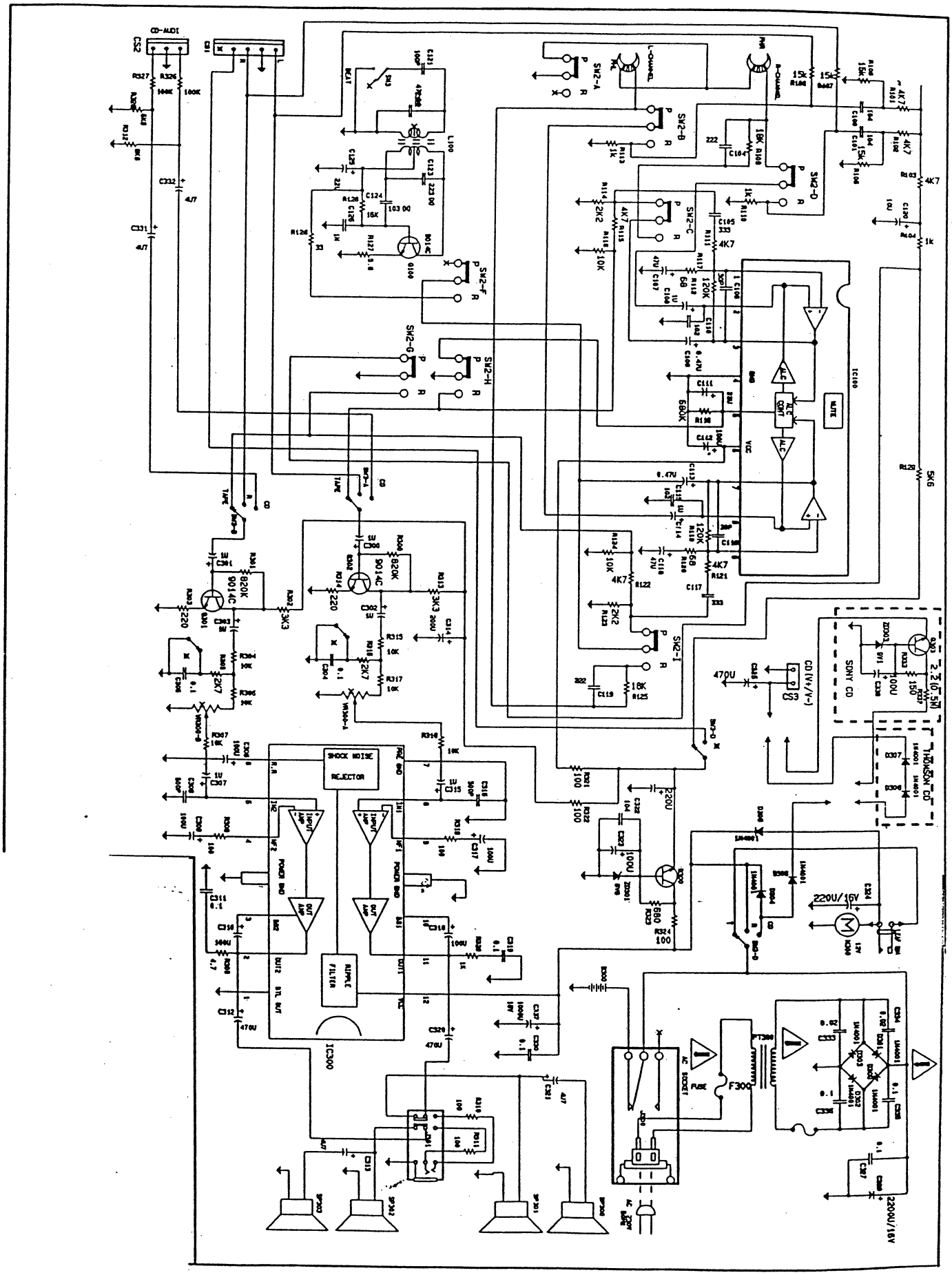
REC.AC BAIS OSC. SECTION



SCHEMATIC DIAGRAM(TUNER P.C.B.)



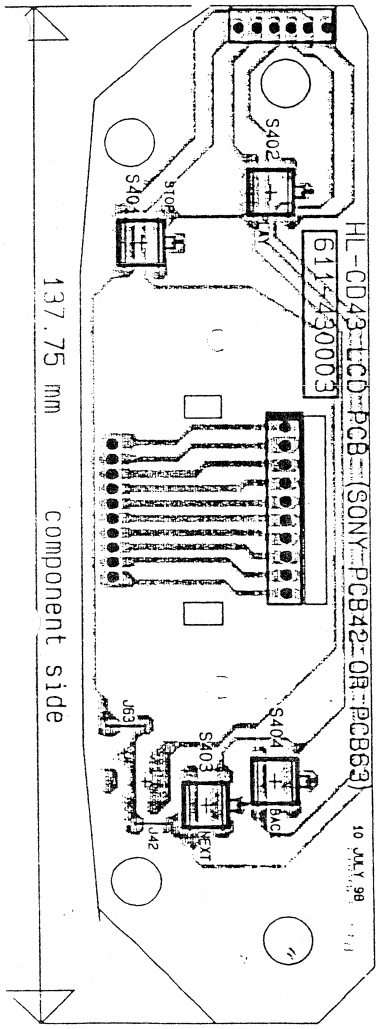
SCHEMATIC DIAGRAM(P.C.B.)

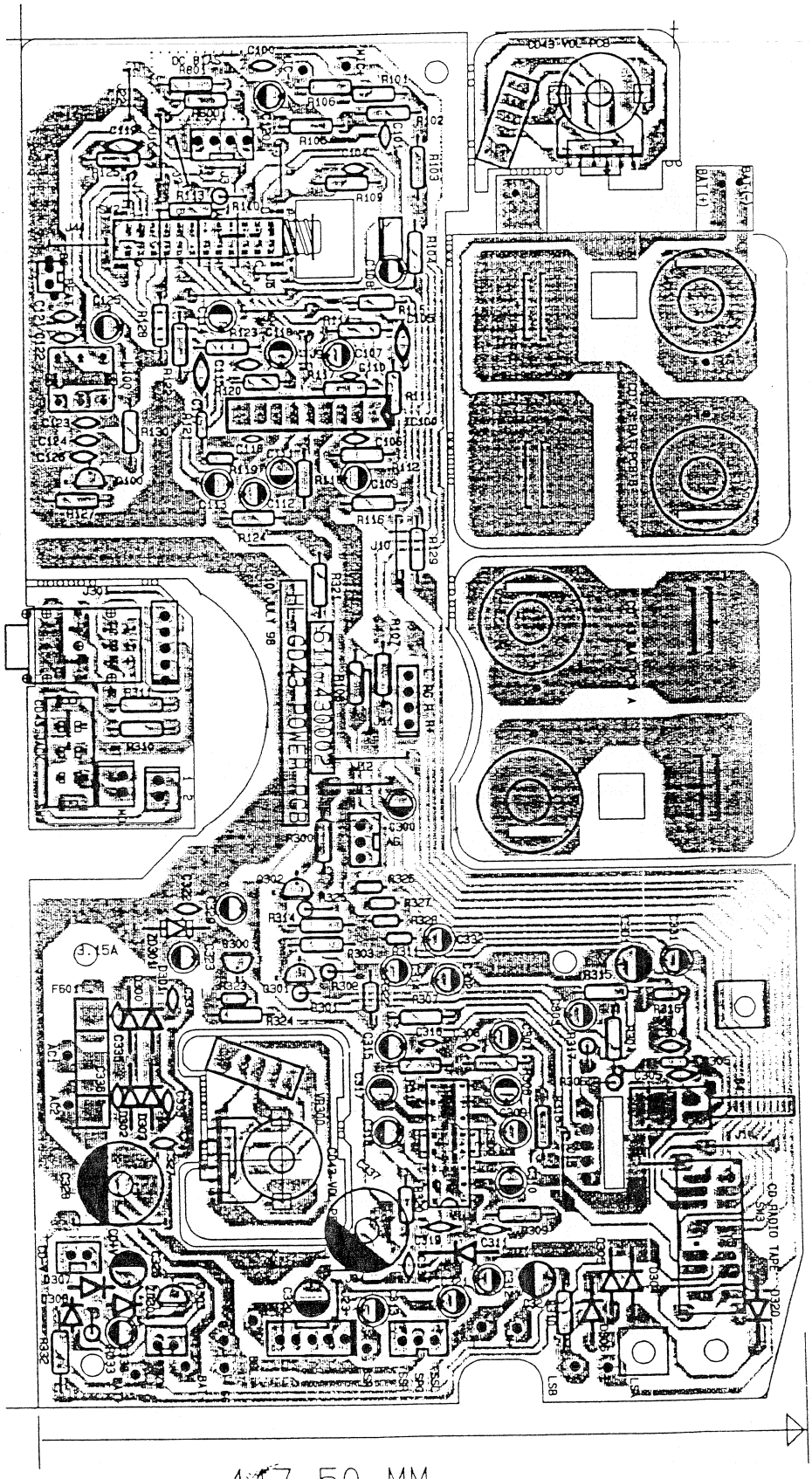


P.C.B. LAYOUT(W/COMPONENT)

MAIN BOARD

CONTROL BOARD





WINING DIAGRAM